



Weaver's Chest of Drawers

Massachusetts cabinetmaker Gene Cosloy says that the inspiration for this piece was an early 19th-century weaver's chest made in the Mt. Lebanon, New York, Shaker community. Cosloy used a red milk paint for the case, which contrasts nicely with the natural butternut drawer fronts. The eight drawers are identical and hand-turned walnut knobs highlight the drawer fronts. The Shakers used the chest mainly for the storage of supplies, but this version could serve in almost any capacity.

The case is basically a dovetailed box, with moldings applied top and bottom. Since the case parts are painted, there's no need to waste a costly hardwood here. Cosloy uses poplar, which he says works easily and accepts

paint well. Of course, if you decide not to go with the painted case, you'll want to use a cabinet-quality hardwood throughout.

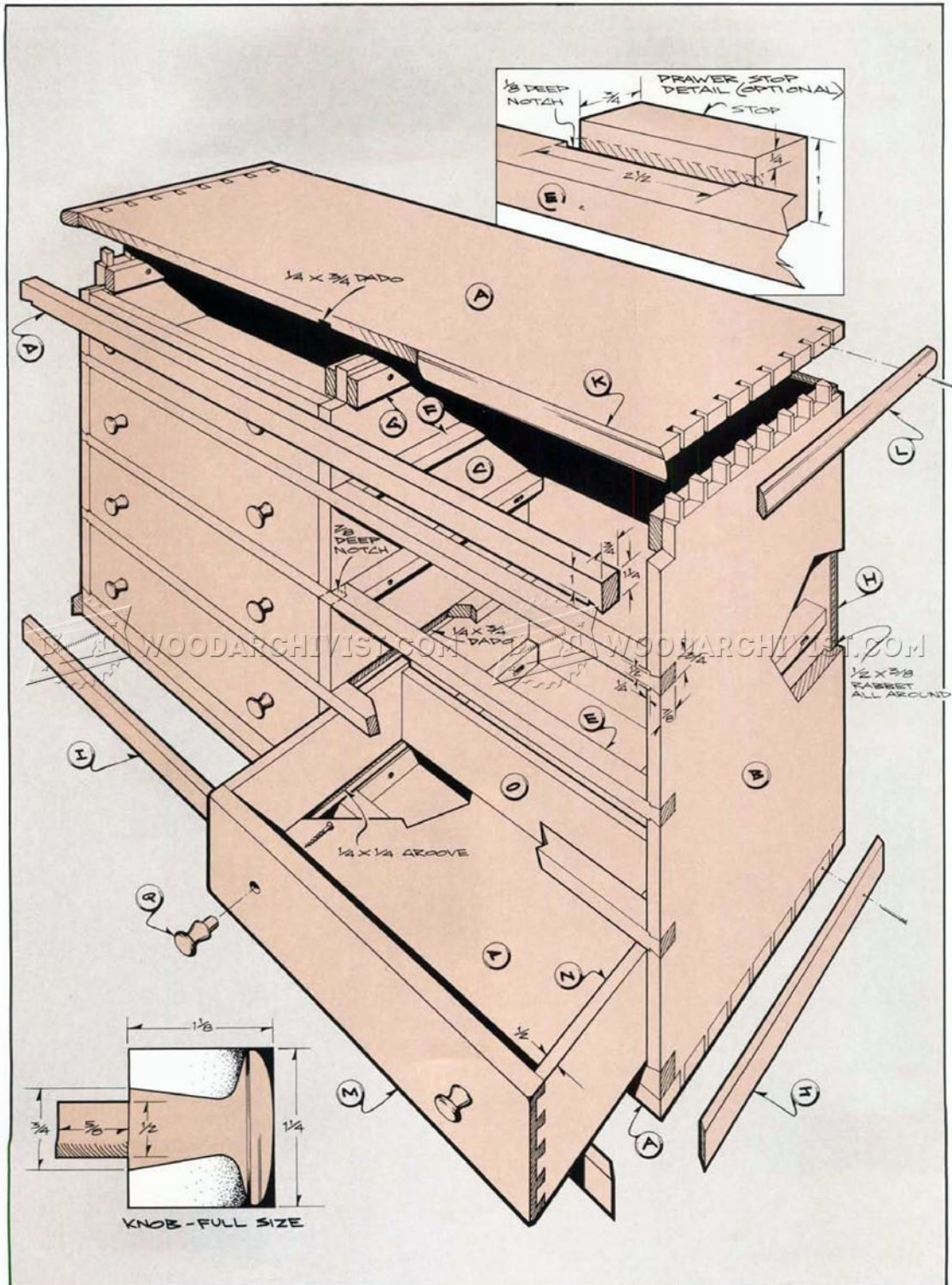
Start by edge-gluing enough material for the case top/bottom (A) sides (B) and divider (C). When dry, lay out and cut the various dadoes in the top, bottom, sides and divider, and the dovetails on the top and bottom and sides.

The dadoes are best cut with the router, using a straightedge clamped to the workpiece as a guide. Take some extra time and check your layouts before starting up the router. Remember, with this or any case piece, it's best to label the various parts and inside/outside faces to avoid confusion.

The dovetails on both the top and bottom are the same. Refer to the top

view detail for the layout. A dovetail jig, if you have one, will speed the dovetail work. However, handcut dovetails are not hard to master, once you've got the technique down. You'll need a marking gauge, a combination square, several very sharp chisels, a coping saw, a sharp pencil or scribe, a good-quality dovetail saw and a mallet. Start by laying out the dovetail depths on the top, bottom and sides. Set the marking gauge for the actual thickness of the parts plus $\frac{1}{32}$ in.

Next, lay out the pins on the sides. Clamp the side securely in the bench vise and use the dovetail saw to establish the pin sides. Don't cut past the depth line that you established with the marking gauge. Now use the coping saw to cut away most of the waste. Stay just a



little away from the depth line. Then remove the side from the vise and clamp it to your workbench so that it's sandwiched between a backup board beneath and a guide board above. The guide board, which is lined up with the depth line, gives you a surface to gauge the chisel against, and the backup board will help avoid chip-out as you clean out the waste. Don't try to get through the entire $\frac{3}{4}$ in. thickness with the chisel in one blow. By using three or four sharp blows with the mallet you'll have more control, which should result in a nice clean cut.

Use the pins on each end of the sides as a template for marking the tails on the matching end of the top/bottom. Lay the top or bottom down on the workbench, and then stand the side up flush with the end. You may want to jig up a right angle with some scrap plywood to help with the positioning. The jig will also enable you to clamp the parts in the proper position, which makes marking much easier. Once the outline has been traced from the pins, transfer the lines to the end grain using a combination square.

Use the dovetail saw to cut the tails, staying on the waste side of the line. Then remove most of the waste as before with the coping saw. Finally, sandwich the top/bottom between the backing board and guide board, and clean out the remaining waste. Also cut the various notches in the divider, and the dovetail notches in the sides to accept the top/bottom and frame rails (D, E). Note that the shoulders of the frame rails fit into the dadoes that you cut earlier for the drawer guides, so there's nothing fussy about the frame rail dovetails. Cut the sides and bottom of these dovetails using the same procedure that you used for the case dovetails.

Now test-fit the case dovetails. If the fit is tight, use the chisel to pare back the pins a bit. If they don't seat fully, undercut the bottom of the flats between the pins, so they slope ever so slightly toward the inside of the case. The fit of the dovetails is important, since with a piece this large assembly takes some time. They should slide together and be a snug fit, but should not require pounding or hammering to assemble. Once glue is applied the wood will swell a bit. If the fit is tight before the glue is applied, then it will be impossible to assemble the joint after the glue is brushed on. By using a white instead of a yellow glue you'll gain a little more

assembly time.

The dovetails on the ends of the top/bottom and frame rails are cut to fit the notches you cut earlier. After assembling these rails, cut and fit the drawer guides (F) and cleats (G). Note that both the drawer guides and cleats are sized to stop $\frac{1}{4}$ in. short of the case back (H). Also, the holes toward the back on these pieces are slotted. The $\frac{1}{4}$ in. space and slotted holes allow for wood movement across the 18 in. width of the sides. Without this allowance, if the guides and cleats were butted tight against the back and then the sides shrunk, either the back or the rails would be forced out.

Bill of Materials

(all dimensions actual)

Part	Description	Size	No. Req'd.
Case			
A	Top/Bottom	$\frac{3}{4}$ x 18 x 60	2
B	Side	$\frac{3}{4}$ x 18 x $31\frac{3}{4}$	2
C	Divider	$\frac{3}{4}$ x $17\frac{1}{2}$ x $30\frac{3}{4}$	1
D	Top/Bottom Rail	$\frac{3}{4}$ x $1\frac{1}{4}$ x 60	2
E	Frame Rail	$\frac{3}{4}$ x $7\frac{7}{8}$ x 60	3
F	Drawer Guide	$\frac{3}{4}$ x $1\frac{1}{4}$ x $16\frac{3}{8}$	12
G	Cleat	$\frac{3}{4}$ x $1\frac{1}{4}$ x $16\frac{1}{2}$	8
H	Back	$\frac{1}{2}$ x $31\frac{1}{2}$ x $59\frac{1}{4}$	1
I	Base Front Mold'g	$\frac{1}{2}$ x $1\frac{1}{2}$ x 61	1
J	Base Side Mold'g	$\frac{1}{2}$ x $1\frac{1}{2}$ x $18\frac{1}{2}$	2
K	Top Front Mold'g	$\frac{3}{4}$ x $7\frac{7}{8}$ x $61\frac{1}{2}$	1
L	Top Side Mold'g	$\frac{3}{4}$ x $7\frac{7}{8}$ x $18\frac{3}{4}$	2
Drawers			
M	Front	$\frac{3}{4}$ x $6\frac{3}{8}$ x $28\frac{7}{8}$	8
N	Side	$\frac{1}{2}$ x $6\frac{3}{8}$ x $17\frac{1}{4}$	16
O	Back	$\frac{1}{2}$ x $5\frac{1}{2}$ x $28\frac{7}{8}$	8
P	Bottom	$\frac{1}{4}$ x 17 x $28\frac{3}{8}$	8
Q	Knob	$1\frac{1}{4}$ dia.	16

The back is $\frac{1}{2}$ in. thick cabinet-grade plywood. The $\frac{1}{2}$ in. by $\frac{3}{8}$ in. rabbet for the back is cut using the router equipped with an edge-guide and rabbeting bit. Stop the cut at the inside corners. You can either square the corners of the rabbet using a chisel, or round the corners of the back to match the bit radius. Use screws and glue to apply the back.

The top molding is just a $\frac{3}{4}$ in. by $\frac{7}{8}$ in. strip, with a $\frac{1}{8}$ in. roundover on the top and bottom edges. Glue the front molding (K) along its full length, but to allow for movement, use glue only on the front and at the miters for the side moldings (L). Finish-nail the back of the side molding, then set the nails and fill the holes before painting. The base moldings (I, J) are applied in the same

way. Note that the top edge of the base moldings is ripped at a 45-degree angle.

You can use our dovetail layout (see drawer detail) for the drawers, or go with a simple rabbeted construction if you prefer. In any event, only the drawer fronts (M) need be butternut. A secondary wood, such as birch or poplar, can be used for the sides (N) and backs (O). The drawer bottoms (P) are $\frac{1}{4}$ in. hardwood plywood, fitted into a $\frac{1}{4}$ in. by $\frac{1}{4}$ in. groove in the front and sides. Use several screws up through the bottom into the back to prevent sagging. You'll note that the drawers are sized for an exact fit in the case, as dimensioned in the Bill of Materials. In practice, you should allow at least a $\frac{1}{16}$ in. gap at the top of the drawer fronts, so they won't bind in the case if they swell a little. The drawers stop against the case back. If the case shrinks a little during the winter months, then the drawers will show a little proud at the front. If the case expands a little during the summer, then the drawers will be inset a bit. If this bothers you, size the drawers so they stop $\frac{1}{4}$ in. short of the back, and mount stops on the back edges of the rails. Since the frame rails are $\frac{7}{8}$ in. wide, you'll need to notch out $\frac{1}{8}$ in. deep on their back edge for the stops (see Drawer Stop detail). The bottom rail, which is $\frac{3}{4}$ in. wide, does not need to be notched for the stop. Use two stops for each drawer.

The knobs (Q) can either be turned from walnut, as shown in our full-size pattern, or you can order a similar knob from Woodcraft Supply Corp., 210 Wood County Industrial Park, Parkersburg, WV 26102. Order their part no. 50L51 for a bag of 10 maple knobs (\$4 postpaid). You'll need two bags since 16 knobs are required. You can dye or stain the maple knobs to look like walnut, or Woodcraft also sells the same size knob in cherry.

We like the combination of a milk-paint finish and natural drawer fronts, and milk paints are available in many lovely colors. They can be ordered from The Old-Fashioned Milk Paint Company, Box 222, Groton, MA 01450. Use an oil finish on the drawer fronts.

Since the flat bottom of the case rests directly on the floor, levelers will be needed if your floors are uneven. For the adjustable levelers you'll need to add blocks on the inside of the case to provide the required mounting thickness. Levelers are available at most hardware stores. 